Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-26 (Cancelled).

Claims 27-41 (Cancelled).

42. (Previously presented) A method for correcting macronutrient and/or micronutrient deficiencies in a medium for growing plants, which consists essentially of the steps of:

(a) determining deficiencies in concentrations of the macronutrients and/or micronutrients in the medium for growing plants;

(b) forming a ready-to-use composition based upon the determined deficiencies of the macronutrients and/or micronutrients, the ready-to-use composition consisting essentially of a reaction product of one or more sulfamic acid compounds and a substantially water-insoluble second compound containing macronutrient and/or micronutrient moieties, which reaction product is a water solution-stable macronutrient and/or micronutrient product in a concentration sufficient to correct the determined deficiencies in the medium for growing plants; and

(c) contacting the medium for growing plants with the ready-to-use composition in an amount sufficient for correcting the deficiencies.

43. (Previously presented) The method of claim 42, wherein said ready-to-use

composition further comprises a plant growth promoting effective amount of solution stable Ca^{+2} moieties; a plant promoting effective amount of solution-stable Mg^{+2} moieties; or a plant promoting effective amount of solution-stable N^{-3} moieties or a combination thereof.

44. (Previously presented) The method of claim 43, wherein said solution stable moieties are a reaction product formed from the reaction of a first reactant selected from the group consisting of sulfamic acid, a water-soluble compound based on sulfamic acid, an oil-soluble compound based on sulfamic acid that is reactable to provide a water solution-stable sulfamate, and combinations thereof; and a second micronutrient and/or macronutrient moiety-including reactant selected from the group consisting of a carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and a combination thereof.

45. (Previously presented) The method of claim 43, wherein the solution stable moieties are formed by reacting effective amounts of at least one member selected from the group consisting of a powdered micronutrient metal, a powdered macronutrient metal, Dolomite, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite(Hydrated Potassium Magnesium Carbonate), Brugnatellite(Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite(Potassium Calcium Carbonate), Calcite (Calcium Carbonate),Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite

(Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite(Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite(Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite (Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide,Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-l, 6-bis(tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-

butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper(II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel(II) carbonate hydroxide, Nickel (II) carbonate (anhydrous),Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and a combination thereof; and, at least one sulfamic acid compound selected from the group consisting of a compound of the formula: $HSO_3NR^4R,^5$ wherein R^4 and R^5 are each independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R^4 or R^5 is hydrogen; a compound of the formula: $R^1 (NR^2R^3)_n nHSO_3NR^4R^5$, wherein R^1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl and aryl, R^2 is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl; R^3, R^4 and R^5 are hydrogen; and n is an integer from 1 to 3; and, combinations thereof.

46. (Previously presented) The method according to claim 42, wherein said composition further comprises a plant growth promoting effective amount of water.

47. (Previously presented) The method according to claim 42, wherein the medium for growing plants is soil.

48. (Previously presented) The method according to claim 42, wherein the medium for growing plants is a hydroponic medium.

49. (Previously presented) The method according to claim 42, wherein the ready-to-use composition of step (ii) is prepared using a software program, whereby the composition is prepared from concentrated plant nutrient stock solutions.

50. (Previously presented) The method according to claim 42, wherein the ready-to-use composition of step (ii) is prepared using a computerized robotic automation system.

51. (Previously presented) A ready-to-use macronutrient and/or micronutrient-adjusting composition produced by a process comprising the steps of:

(a) determining deficiencies in concentrations of macronutrients and/or micronutrients or both in a medium for growing plants; and

(b) forming a ready-to-use composition based upon the determined deficiencies of the macronutrients and/or micronutrients, the ready-to-use composition consisting essentially of a reaction product of one or more sulfamic acid compounds and a substantially water-insoluble second compound including macronutrient and/or

micronutrient moieties, which reaction product is a water solution-stable macronutrient and/or micronutrient product in a concentration sufficient to correct the determined deficiencies in the medium for growing plants.

52. (Previously presented) The composition of claim 51, wherein said composition further comprises a plant growth promoting effective amount of solution-stable Ca^{+2} moieties; a plant promoting effective amount of solution-stable S^{+6} moieties; a plant promoting effective amount of solution-stable Mg^{+6} moieties; or a plant promoting effective amount of solution-stable N^{-3} moieties or a combination thereof.

53. (Previously presented) The composition of claim 52, wherein said solution-stable moieties are a reaction product formed from the reaction of a first reactant selected from the group consisting of sulfamic acid, a water-soluble compound based on sulfamic acid, an oil-soluble compound based on sulfamic acid that is reactable to provide a water solution-stable sulfamate, and combinations thereof; and a second micronutrient and/or macronutrient moiety-including reactant selected from the group consisting of a carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and combinations thereof.

54. (Previously presented) The composition of claim 52, wherein the solution stable moieties are formed by reacting effective amounts of at least one member selected from the group consisting of a powdered micronutrient metal, a powdered macronutrient metal, Dolomite, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium

Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide),Barringtonite (Hydrated Magnesium Carbonate), Baylissite(Hydrated Potassium Magnesium Carbonate), Brugnatellite(Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite(Potassium Calcium Carbonate), Calcite (Calcium Carbonate),Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite(Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite(Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite

(Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide,Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-l, 6-bis(tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper(II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel(II) carbonate hydroxide, Nickel (II) carbonate (anhydrous),Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and a combination thereof; and, at least one sulfamic acid compound selected from the group consisting of a compound of the formula: $HSO_3NR^4R,^5$ wherein R^4 and R^5 are each independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R^4 or R^5 is hydrogen; a compound of the formula: R^1 (NR^2R^3) n nHSO$_3$NR^{4}R^5, wherein R^1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl and aryl, R^2 is selected from the

group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl; R^3, R^4 and R^5 are hydrogen; and n is an integer from 1 to 3; and, combinations thereof.

55. (Previously presented) The composition of claim 52, wherein said composition further comprises a plant growth promoting effective amount of water.

56. (Previously presented) A method for forming a ready-to-use macronutrient- and/or micronutrient-adjusting composition, which comprises the steps of:

(a) determining deficiencies in concentrations of macronutrients or and/or micronutrients or both in a medium for growing plants; and

(b) forming a ready-to use composition based upon the determined deficiencies of the macronutrients or micronutrients or both, the ready-to-use composition consisting essentially of a reaction product of one or more sulfamic acid compounds and a substantially water insoluble second compound including macronutrient and/or micronutrient moieties, which reaction product is a water solution-stable macronutrient and/or micronutrient product in a concentration sufficient to correct the determined deficiencies in the medium for growing plants.

57. (Previously presented) The method of claim 56, wherein said composition further comprises a plant growth promoting effective amount of solution-stable Ca^{+2} moieties; a plant promoting effective amount of solution-stable S^{6+} moieties; a plant promoting effective amount of solution-stable Mg^{+2} moieties; or a plant promoting effective amount of solution-stable N^{-3} moieties or a combination thereof.

58. (Previously presented) The method of claim 57, wherein said solution stable moieties are a reaction product formed from the reaction of a first reactant selected from the group consisting of sulfamic acid, a water-soluble compound based on sulfamic acid, an oil-soluble compound based on sulfamic acid that is reactable to provide a water solution-stable sulfamate, and combinations thereof; and a second micronutrient and/or macronutrient moiety-including reactant selected from the group consisting of carbonate, a hydroxide, a carbonate hydroxide, a hydroxide oxide, a metal, and combinations thereof.

59. (Previously presented) The method of claim 57, wherein the solution stable moieties are formed by reacting effective amounts of at least one member selected from the group consisting of a powdered micronutrient metal, a powdered macronutrient metal, Dolomite, Aragonite (Calcium Carbonate), Artinite (Hydrated Magnesium Carbonate Hydroxide), Aurichalcite (Zinc Copper Carbonate Hydroxide), Azurite (Copper Carbonate Hydroxide), Barringtonite (Hydrated Magnesium Carbonate), Baylissite(Hydrated Potassium Magnesium Carbonate), Brugnatellite(Hydrated Magnesium Iron Carbonate Hydroxide), Butschliite(Potassium Calcium Carbonate), Calcite (Calcium Carbonate),Gaspeite (Nickel Magnesium Iron Carbonate), Magnesite (Magnesium Carbonate), Rhodochrosite (Manganese Carbonate), Siderite (Iron Carbonate), Smithsonite (Zinc Carbonate), Ankerite (Calcium Iron Carbonate), Huntite (Calcium Magnesium Carbonate), Kutnohorite(Calcium Manganese Magnesium Iron Carbonate), Minrecordite (Calcium Zinc Carbonate), Norsethite (Barium Magnesium

Carbonate), Fairchildite (Potassium Calcium Carbonate), Georgeite (Hydrated Copper Carbonate Hydroxide), Hellyerite(Hydrated Nickel Carbonate), Hydrozincite (Zinc Carbonate Hydroxide), Ikaite (Hydrated Calcium Carbonate), Kalicinite (Potassium Bicarbonate), Lansfordite (Hydrated Magnesium Carbonate), Loseyite (Manganese Zinc Carbonate Hydroxide), Malachite (Copper Carbonate Hydroxide), Monohydrocalcite (Hydrated Calcium Carbonate), Nesquehonite (Hydrated Magnesium Bicarbonate Hydroxide), Pokrovskite (Hydrated Magnesium Carbonate Hydroxide), Pyroaurite (Hydrated Magnesium Iron Carbonate Hydroxide), Glaukospherite (Copper Nickel Carbonate Hydroxide), Mcguinnessite (Magnesium Copper Carbonate Hydroxide), Nullaginite (Nickel Carbonate Hydroxide), Rosasite (Copper Zinc Carbonate Hydroxide), Zincrosasite (Zinc Copper Carbonate Hydroxide), Sclarite (Zinc Magnesium Manganese Carbonate Hydroxide), Sergeevite (Hydrated Calcium Magnesium Carbonate Bicarbonate Hydroxide), Sjogrenite (Hydrated Magnesium Iron Carbonate Hydroxide), Teschemacherite (Ammonia Bicarbonate), Vaterite (Calcium Carbonate), Zaratite (Hydrated Nickel Carbonate Hydroxide), Tetra-n-butylphosphonium hydroxide,Tetra-n-butylammonium hydroxide, Tetramethylammonium hydroxide, Tetraethylammonium hydroxide, Iron (III) oxyhydroxide, Iron (III) hydroxide (gamma), Iron (III) hydroxide (alpha), Potassium hydroxide, Nickel (II) hydroxide, Hexane-l, 6-bis(tributylammonium) dihydroxide, Calcium hydroxide, Tetra-n-propylammonium hydroxide, Tetra-n-butylphosphonium hydroxide, Tetra-n-butylammonium hydroxide, Cobalt (II) hydroxide, Copper(II) carbonate dihydroxide, Copper (II) carbonate (basic), Copper (II) hydroxide, Ammonium hydroxide, Magnesium carbonate hydroxide, Methylboron dihydroxide, Magnesium hydroxide, Molybdenum hydroxide oxide phosphate Calcium phosphate

hydroxide, Calcium phosphate tribasic, Calcium hydroxide, Zinc subcarbonate, Zinc carbonate (basic), Zinc carbonate hydroxide, Zinc hydroxide, Potassium bicarbonate, Potassium hydrogen carbonate, Potassium carbonate, Nickel (II) carbonate, Nickel(II) carbonate hydroxide, Nickel (II) carbonate (anhydrous),Nickel (II) carbonate (basic), Manganese (II) carbonate, Magnesium carbonate (basic), Magnesium carbonate hydroxide, Ammonium bicarbonate, Ammonium hydrogen carbonate, Ammonium carbonate, Nickel (II) hydroxide, Calcium phosphate hydroxide, Calcium phosphate tribasic, limestone, Magnesite, lime, slaked lime, magnesium oxide, and a combination thereof; and, at least one sulfamic acid compound selected from the group consisting of a compound of the formula: $HSO_3NR^4R,^5$ wherein R^4 and R^5 are each independently selected from the group consisting of hydrogen and a monovalent hydrocarbyl group containing from 1 to about 10 carbon atoms; and at least one of R^4 or R^5 is hydrogen; a compound of the formula: R^1 (NR^2R^3) n nHSO$_3$NR^{4}R^5, wherein R^1 is selected from the group consisting of alkyl, hydroxyalkyl, cycloalkyl and aryl, R^2 is selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cycloalkyl and aryl; R^3, R^4 and R^5 are hydrogen; and n is an integer from 1 to 3; and, combinations thereof.

60. (Previously presented) The method according to claim 59, wherein said composition further comprises a plant growth promoting effective amount of water.

61. (Previously presented) The method of claim 42, wherein the one or more sulfamic acid compounds is sulfamic acid.

62. (Previously presented) The composition of claim 51, wherein the one or more sulfamic acid compounds is sulfamic acid.

63. (Previously presented) The method of claim 56, wherein the one or more sulfamic acid compounds is sulfamic acid.

64. (Previously presented) The method of claim 42, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing calcium carbonate, magnesium carbonate, manganese carbonate and sulfamic acid.

65. (Previously presented) The method of claim 42, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing calcium carbonate, magnesium carbonate, potassium carbonate and sulfamic acid.

66. (Previously presented) The method of claim 42, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing dolomite and sulfamic acid.

67. (Previously presented) The composition of claim 51, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing calcium carbonate, magnesium carbonate, manganese carbonate and sulfamic acid.

68. (Previously presented) The composition of claim 51, wherein the formed

ready-to-use composition comprises a reaction product prepared by admixing calcium carbonate, magnesium carbonate, potassium carbonate and sulfamic acid.

69. (Previously presented) The composition of claim 51, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing dolomite and sulfamic acid.

70. (Previously presented) The composition of claim 56, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing calcium carbonate, magnesium carbonate, manganese carbonate and sulfamic acid.

71. (Previously presented) The composition of claim 56, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing calcium carbonate, magnesium carbonate, potassium carbonate and sulfamic acid.

72. (Previously presented) The composition of claim 56, wherein the formed ready-to-use composition comprises a reaction product prepared by admixing dolomite and sulfamic acid.

73. (Previously presented) The method of claim 42, wherein the formed ready-to-use composition is in a solution stable state.

74. (Previously presented) The composition of claim 51, which is in a solution

stable state.

75. (Previously presented) The method of claim 56, wherein the formed ready-to-use composition is in a solution stable state.

76. (New) The method of claim 45, wherein the substantially water-insoluble second compound containing macronutrient and/or micronutrient moieties comprise an iron-containing compound.

77. (New) The method of claim 76, wherein the iron-containing compound is siderite (iron carbonate).

78. (New) The composition of claim 54, wherein the substantially water-insoluble second compound containing macronutrient and/or micronutrient moieties comprise an iron-containing compound.

79. (New) The composition of claim 78, wherein the iron-containing compound is siderite (iron carbonate).